Name: Rachel Fischhoff Grade: 5 Date: April 25, 2012

Area of a Triangle

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| Lesson Sources: Envision |
| Lesson Objectives: Students will be able to determine the area of triangles by exploring and applying the formula for the area of a triangle. |
| Standards: CC 6G.1: Find the area of right triangles, other triangles, special quadrilaterals,  and polygons by composing into rectangles or decomposing into  triangles and other shapes; apply these techniques in the context of  solving real-world and mathematical problems. |
| Multicultural Content: |
| Materials and Advanced Preparation: copies of envision pages for independent work |
| Prior Knowledge and Skills Needed: area of a rectangle |
| Key/New Vocabulary: n/a  diagonal |

Lesson Procedure: Part One

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| **Time** | **Teacher Actions** | **Student Learning Activities** | **Form of Assessment** |
| 1 min | **1. Connection**   * Mathematicians, we have talked about how to use the dimensions of a rectangle to find that figure’s area. Today, we are going to learn how that information can help us understand how to solve for the area of a triangle. **√** | Explain purpose of mini-lesson |  |
| 10 min max | **2. The Teaching (The Giving of Information):**   * I’m going to begin by drawing a rectangle in my notebook. The dimensions of my rectangle are 10 units by 5 units. * Thumb on your knee when you know the area of this rectangle * 50 units * Now I’m going to divide my rectangle into two sections. I’ve split it in two, like cutting a sandwich on the diagonal. I think that both of these triangles take up the same amount of space—they have the same area. Do you agree? * I think that each of these has an area that is *half* of my original area. That would mean each triangle had an area of ½ 50, or 25 units. **√** | * Active listening | * Active listening |
|  | **3. Have-A-Go (optional)**   * In your own notebook, draw this next rectangle. It’s dimensions are 8 x 4. Now draw a line dividing this shape into two triangles. * With your Turn and Talk partner, decide what is the area of each of these triangle. * Then, with your partner, could you come up with a rule—a mathematical formula—that would allow you to solve for the area of other triangles? * Come back together to discuss findings. * Reframe the area of a rectangle—or parallelogram—as Base Times Height. Then, if this is true (A = b x h) and triangles can be made from dividing a rectangle in two, the area of a triangle can be thought of as A = ½ x b x h. * Let’s try a problem from the book together—1 and 2. | How will students be actively involved?  By:   * Partner Talk | * Conferring * Sharing out from turn and talks |
|  | **4. The Link**   * Today, use what you know about the area of a triangle—that it’s area can be found by using the rule A = ½ x b x h to solve problems 5-16. | **(Workshop Time)**   * Working through problem set from Envision. | * Conferring * Applying formula |
|  | **5. Closing (at the share)**  What worked well? What’s still confusing? | * Share a-has, and sticking points. |  |

**Reflections:**

How did the lesson plan work? What was effective? What did you learn? What would you change for tomorrow or the next time you will use this plan?